

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
17 July 2003 (17.07.2003)

PCT

(10) International Publication Number
WO 03/057664 A1

(51) International Patent Classification⁷: **C07C 259/02**,
C07D 413/14, 295/08, 213/89, A61K 31/4406, 31/5395

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(21) International Application Number: **PCT/HU03/00003**

(22) International Filing Date: 10 January 2003 (10.01.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
P 0200109 11 January 2002 (11.01.2002) HU
P 0204362 17 December 2002 (17.12.2002) HU

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **CARBOXAMIDINE DERIVATIVES AND THEIR USE IN THE TREATMENT OF VASCULAR DISEASES**

(57) Abstract: The invention relates to carboxamidine derivatives to pharmaceutical compositions containing the same and the use thereof in the preparation of pharmaceutical compositions for the treatment of vascular diseases.

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INTERNATIONAL SEARCH REPORT

 Intel onal Application No
 PCT/HU 00003

A. CLASSIFICATION OF SUBJECT MATTER

 IPC 7 C07C259/02 C07D413/14 C07D295/08 C07D213/89 A61K31/4406
 A61K31/5395

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 47362 A (BERZY TAMAS ;CSAKAI ZITA (HU); KOCSY GABOR (HU); MARVANYOS EDE (HU) 29 October 1998 (1998-10-29) page 11, line 21 - line 22 ---	8
X	WO 98 06400 A (BIOREX RT ;ERDO SANDOR (HU); KURUCZ ISTVAN (HU); MARVANYOS EDE (HU) 19 February 1998 (1998-02-19) cited in the application claims 1,10 ---	8
X	WO 97 16439 A (HEGEDUES ERZSEBET ;LITERATI NAGY PETER (HU); MEDZIHRA DSZKY DENES () 9 May 1997 (1997-05-09) cited in the application page 58; example 36 page 4, paragraph 17 ---	8
-/-		

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

2 April 2003

Date of mailing of the international search report

16/04/2003

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INTERNATIONAL SEARCH REPORT

Int'l Application No
PCT/HU/00003

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 919 796 A (UDVARDY-NAGY ISTVANNE ET AL) 6 July 1999 (1999-07-06) example 7 claims 17,18 -----	8
X	WO 90 04584 A (BIOREX KUTATO FEJLESZTOE KFT) 3 May 1990 (1990-05-03) example 6 claim 7 -----	16
A	WO 01 79174 A (JEGESNE CSAKAI ZITA ;SZAKACSNE SCHMIDT ANIKO (HU); TOEMOESKOEZI IS) 25 October 2001 (2001-10-25) the whole document -----	5-17

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/HU 03/00003

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1-4, 18-20
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-4, 18-20

The Formulas (i), (ii) and (iii) are nowhere to be found in the application as filed, and no correction is present on file. Correspondingly the search has been restricted to the molecules specifically named in claims 5-17 and to their use for the treatment of vascular diseases.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/HK/00003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9847362	A	29-10-1998	HU 9702365 A2 28-01-1999
			AU 748367 B2 06-06-2002
			AU 7070398 A 13-11-1998
			BR 9808976 A 01-08-2000
			EP 1018876 A1 19-07-2000
			HR 980217 A1 31-12-1998
			WO 9847362 A1 29-10-1998
			HU 9802890 A2 29-03-1999
			JP 2002514216 T 14-05-2002
			NZ 500579 A 26-10-2001
			US 2001051630 A1 13-12-2001
			ZA 9803336 A 26-01-1999
WO 9806400	A	19-02-1998	HU 9701349 A1 28-05-2000
			AU 739614 B2 18-10-2001
			AU 3704997 A 06-03-1998
			BG 103194 A 30-09-1999
			CZ 9900435 A3 14-07-1999
			EE 9900044 A 16-08-1999
			EP 0966283 A2 29-12-1999
			HR 970433 A1 31-08-1998
			WO 9806400 A2 19-02-1998
			JP 2001504446 T 03-04-2001
			NO 990547 A 25-03-1999
			PL 331601 A1 02-08-1999
			SK 15499 A3 14-02-2000
			US 6143741 A 07-11-2000
			ZA 9707043 A 21-09-1998
WO 9716439	A	09-05-1997	HU 76659 A2 28-10-1997
			AT 221880 T 15-08-2002
			AU 720195 B2 25-05-2000
			AU 7326396 A 22-05-1997
			BG 101713 A 31-03-1998
			BR 9607565 A 20-07-1999
			CA 2209167 A1 09-05-1997
			CN 1177351 A 25-03-1998
			CZ 9702072 A3 18-03-1998
			DE 69622840 D1 12-09-2002
			DK 801649 T3 02-12-2002
			EE 9700146 A 15-12-1997
			EP 0801649 A2 22-10-1997
			HR 960508 A1 30-06-1998
			WO 9716439 A1 09-05-1997
			JP 10512590 T 02-12-1998
			NO 973059 A 02-09-1997
			NZ 320523 A 25-05-2001
			PL 322015 A1 05-01-1998
			PT 801649 T 31-12-2002
			SI 801649 T1 31-12-2002
			SK 88197 A3 08-04-1998
			TR 9700574 T1 23-08-1999
US 5919796	A	06-07-1999	HU 71409 A2 28-11-1995
			AT 170170 T 15-09-1998
			AU 691284 B2 14-05-1998
			AU 2416195 A 29-11-1995
			BG 63336 B1 31-10-2001

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/HU/000003

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5919796	A		BG 100954 A	29-08-1997
			BR 9507619 A	23-09-1997
			CA 2189652 A1	16-11-1995
			CN 1151728 A ,B	11-06-1997
			CZ 9603251 A3	11-06-1997
			DE 69504329 D1	01-10-1998
			DE 69504329 T2	08-04-1999
			DK 758315 T3	25-05-1999
			EE 3296 B1	16-10-2000
			EP 0758315 A1	19-02-1997
			ES 2123252 T3	01-01-1999
			FI 964436 A	27-11-1996
			WO 9530649 A1	16-11-1995
			JP 9512815 T	22-12-1997
			NO 964677 A	05-11-1996
			NZ 285151 A	24-09-1998
			PL 317154 A1	17-03-1997
			RO 115873 B	28-07-2000
			SI 758315 T1	31-12-1998
			SK 143096 A3	04-06-1997
WO 9004584	A	03-05-1990	HU 54110 A2	28-01-1991
			AT 102603 T	15-03-1994
			AU 620460 B2	20-02-1992
			AU 4418689 A	14-05-1990
			CA 2000830 A1	20-04-1990
			DE 68913737 D1	14-04-1994
			DE 68913737 T2	28-07-1994
			DK 149790 A	19-06-1990
			EP 0417210 A1	20-03-1991
			ES 2020030 A6	16-07-1991
			FI 93214 B	30-11-1994
			GR 89100669 A ,B	29-11-1990
			WO 9004584 A1	03-05-1990
			HU 9500117 A3	28-06-1995
			IE 65113 B1	04-10-1995
			IL 92000 A	24-06-1994
			JP 8019078 B	28-02-1996
			JP 3502931 T	04-07-1991
			KR 154117 B1	01-12-1998
			NO 902703 A ,B,	18-06-1990
			PL 164547 B1	31-08-1994
			PT 92041 A ,B	30-04-1990
			RU 2093508 C1	20-10-1997
			US 5328906 A	12-07-1994
			US 5147879 A	15-09-1992
			US 5296606 A	22-03-1994
WO 0179174	A	25-10-2001	HU 0001583 A2	28-11-2002
			AU 5499701 A	30-10-2001
			EP 1274685 A1	15-01-2003
			WO 0179174 A1	25-10-2001
			NO 20025015 A	16-12-2002